DOCUMENT RESUME

ED 163 693 EC 112 622

AUTHOR	Chambers, Jack A.; Barron, Frank
TITLE	Identifying the Culturally Different Gifted Student.
INSTITUTION	California State Univ., Fresno. Dept. of Psychology.
SPONS AGENCY	California State Dept. of Education, Sacramento.
PUB DATE	Jul 78
GRANT	77-11-D
NOTE	83p.
EDRS PRICE	MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Adjustment (to Environment); Check Lists; Creativity Tests; *Cultural Differences; Culture Free Tests; Elementary Education; *Evaluation Criteria; Exceptional Child Research; *Gifted; *Identification; *Mexican Americans; Rural Schools; Screening Tests; Student Characteristics; *Test Validity; Urban Schools
IDENTIFIERS	Adaptive Behavior Scales; Barron Symbol Equivalence Test; Barron Welsh Art Scale; Culture Fair Intelligence Test; Personal Adjective Check List; Wallach and Kagan Creativity Test Battery

ABSTRACT

The study was designed to provide a relatively simple method of identifying gifted Mexican-American elementary school children, using as Ss approximately 298 Mexican-Americans (in grades 3-6) from both urban and rural schools. Ss were rated by present and former teachers on traits found to be characteristic of highly creative and talented individuals (Student Check List), and on the American Association of Mental Deficiency Adaptive Behavior Scale. Ss were given the IPAT (Institute for Personality and Ability Testing) Culture Fair Intelligence Test, the Wallach-Kagan Tests of Creativity, the Barron-Welsh Art Scale, the Barron Symbol Equivalence Test, and the Personal Adjective Check List. All tests except the Personal Adjective Check List were found to give fairly consistent results when compared to teacher ratings. Sequential screening batteries were developed which require relatively little testing time while yielding reasonable levels of both effectiveness and efficiency. Appendixes include the Student Check List, the Wallach-Kagan Tests, the Barron Symbol Equivalence Test, the Personal Adlective Check List, and an instruction set for identifying the culturally different gifted student. (Author/PHR)

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IDENTIFYING THE CULTURALLY DIFFERENT GIFTED STUDENT

ED163693

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Prepared Under Grant No. 77-11-D Between the California State Department of Education and California State University, Fresno

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Department of Psychology and
Center for Information Processing
California State University, Fresno

July 29, 1978

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FORWARD

The study reported here was part of a program of research in Special Education in the Department of Psychology and Center for Information Processing, California State University, Fresno. The study was carried out during the academic year 1977/78 under the auspices of the Special Education Research Program, supported by Grant No. 77-11-D between the State Department of Education and California State University, Fresno.

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The investigators wish to express their appreciation to the superintendents, principals and teachers of the Selma and Pajaro Valley School Districts for their participation in this project. Special thanks are due to Don Turpin and Frank Starkey who coordinated the study in the Selma schools, and to William Boone and Cameron Smith who played similar roles in the gathering of data in the Pajaro Valley schools. Finally, grateful appreciation is extended to Jerry Sprecher, who served as Research Associate on the project, and to John Howard, Robert Yeager, Guadalupe Abby, Judy Johnson, RoseMarie Ramirez, and Brenda Griesner, all of whom provided the nessary support to enable the project to be successfully completed during the 1977/78 year.

Jack A. Chambers
Principal Investigator
July 29, 1978

IDENTIFYING THE CULTURALLY DIFFERENT GIFTED STUDENT

ABSTRACT

This study assumed that special education programs for the gifted have as their ultimate goal, the aiding of those students (who show the greatest potential for future high level intellectual and creative contributions) to ultimately perform at their highest levels. It further assumed that giftedness embraces a number of traits in addition to high level IQ, as found in studies of highly creative and talented persons. Within this context, the study was delimited to culturally different students, and an attempt was made to provide a relatively simple method of identifying those Mexican-American students who could most profit from special education programs for the gifted.

Approximately 298 Mexican-American students in grades three through six in the Selma School District (categorized as urban), and the Pajaro Valley School District (categorized as rural) served as subjects. They were rated by current and former teachers on traits found to be characteristic of highly creative and talented persons. In addition, teachers completed the AAMD Adaptive Behavior Scale for each subject. They were then divided into upper and lower groups on the basis of overall ratings. All students were administered the IPAT Culture Fair Intelligence Test, the Wallach-Kogan Tests of Creativity, the Barron-Welsh Art Scale, the Barron Symbol Equivalence Test, and a Personal Adjective Check List.

Results of the analyses between test data and teacher ratings indicated consistent significant results with the IPAT IQ Test throughout all grade levels. The Wallach-Kogan Tests and the Barron Symbol Equivalence Test also showed fairly consistent significant results. The Personal Adjective Check List added little to the test battery, and test-retest reliability was found to be low. With that test excluded, Multiple Correlations of .55 to .78 were obtained, indicating the ability of the tests to predict the teacher ratings in a highly significant manner. Sequential screening batteries were developed which require relatively little testing time, while yielding reasonable levels of both effectiveness and efficiency (i.e., at relatively small cost, the tests identify the majority of Mexican-American students who, according to teacher ratings, show the greatest potential for future contributions of a high intellectual and creative nature, while at the same time screening out the majority of Mexican-American students who, according to teacher ratings, show the least potential for such contributions).

Results of the tests in relation to AAMD Adaptive Behavior Scale scores again indicated consistent significant results between scales and the IPAT IQ Test. Traits such as Language Development, Vocational Activity, Self-Direction and Responsibility showed more significant results in relation to test scores than did traits such as Violent and Destructive Behavior, Anti-Social Behavior, etc.

Measures of socio-economic background and language spoken in the home were found to be correlated. Highest socio-economic levels were associated with English as the predominant language spoken in the home. Socio-economic level and language spoken in the home were found to have little effect on either teacher ratings or results of the AAMD Adaptive Behavior Scale scores.

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IDENTIFYING THE CULTURALLY DIFFERENT GIFTED STUDENT

HISTORICAL OVERVIEW AND LITERATURE REVIEW

Hilliard (1976), in a recent study and survey of the literature, quite aptly pointed out that there is no commonly accepted definition of "gifted." He further cited considerable evidence to indicate that one of the more widely used criteria of giftedness, i.e., scores on IQ tests, severely penalize persons with culturally different backgrounds.

The State of California at this time uses students' IQ scores as the main criterion for admission to special education programs for the gifted. Thus, by implication, giftedness is defined as predominately the demonstration of high level convergent thinking abilities. Some California school districts have already begun to question the validity of this assumption, especially in reference to the penalties such culturally loaded verbal assessment devices place on culturally different students.

This study assumed that giftedness embraces more than just high level convergent thinking abilities. It assumed that the ultimate goal of special education programs for the gifted is the aiding of those students (who show the greatest potential for future high level intellectual and creative contribution) to ultimately perform at their highest levels. Within this context, the study was further delimited to a concern with students having culturally different backgrounds, since such students appeared to be receiving the least support from the present assessment procedures.

The study was thus designed to provide tools with which to identify gifted students having cu turally different backgrounds. The tools investigated were chosen so as to provide a relatively simple identification procedure which could be applied to large segments of the Mexican-American student population throughout California at relatively low cost. The end result was forecast to be a reasonably fair and equitable solution to the problem of identification of those culturally different students who could most profit from enrichment programs such as those provided under California legislation for the gifted.

A primary rationale for the study was that students should be identified for inclusion in gifted education programs on the basis of indications of potential for future high level intellectual and creative contributions. Therefore, measuring instruments used in the study, in addition to providing a simple identification procedure, were also chosen on the basis of having been found in previous research to consistently provide adequate measurements of the significant characteristics of persons who had achieved at high intellectual and creative levels, as evidenced through their scholarly or artistic contributions.

A considerable amount of evidence has been accumulated over the past 50 years in regard to the characteristics of such persons. The early pioneer work in this area was done by Terman (Terman and Oden, 1959), who was concerned primarily with persons exhibiting high level intellectual abilities of a convergent nature. Later, Guilford (1950), suggested the possibility of the importance of divergent thinking abilities. His work was elaborated by Torrance

(1975), Getzels and Jackson (1962), Wallach and Kogan (1965), and many others. Although the degree of the relationship of such traits to high level intellectual and creative behavior is still controversial (Dellas and Gaier, 1970), sufficient evidence has been gathered to indicate there is some relationship (Bartlett and Davis, 1974; Chambers, 1969; Cropley, 1972; Cropley and Maslany, 1969; Wallbrown and Huelsman, 1975).

Following Guilford, in addition to the work on cognitive traits, considerable work was also done examining the relationship of personality, motivational, and other traits to high level contributions in the arts and sciences. Early studies in this area were conducted by Roe (1953), Barron (1961), MacKinnon (1961a), Chambers (1964), Taylor (1964a; 1964b), and others. Such studies established fairly conclusively that the personal traits of persons who produce high level intellectual and creative products include cognitive flexibility, introversion, perceptual openness, strong initiative and drive, dominance, persistence, esthetic sensitivity, preference for complexity, strong ego control, and a striving for excellence (Dellas and Gaier, 1970). Many of these same traits were found to be characteristic of creative high school students (Parloff and Datta, 1965), and in an evaluation of the literature on this topic, Dellas and Gaier (1970) concluded that the traits of importance to high level intellectual and creative performance develop early, and suggested that persons showing such potential abilities be identified as early as possible -- perhaps even in pre-school years.

A second rationale for the study rested on the little disputed evidence regarding the inability of culturally different

students to obtain high scores on the most frequently used standardized intelligence tests (Bruch, 1975; Montgomery, 1973). Although the bulk of the literature on this topic and others related to this research proposal was concerned with the negro population, the studies are germane and provide data relating to culturally different populations in general.

Differences in test scores between culturally different and non-culturally different populations have been attributed to a number of different factors, including lack of adequate visual discrimination ability (Kunz and Moyer, 1969; Richmond and Norton, 1973), lack of perceived reward in test situations (Dill, 1972; Johnson, 1974), and probably most importantly, lack of adequate verbal skills due to a deficient amount of verbal stimulation in the home situation (Richmond, 1971).

A final rationale for this study was that with appropriate training, such deficiencies can be overcome so that ultimately culturally different students can achieve in the given culture. Evidence for the effectiveness of such special training comes from the work of Khatena (1971), Torrance and Torrance (1972), and Wolfe (1971).

METHODS

Subjects

Approximately 298 third, fourth, fifth, and sixth grade culturally different students in two California Public School Districts were identified to serve as subjects. Students in the Selma School District, in the Metropolitan Fresno area, served as representatives of an urban population, while students in the Pajaro Valley School district (Watsonville) represented a rural population. The specific schools involved from the Selma District were Terry, Indianola, and Eric White, while from the Pajaro Valley School District schools included Hall District and MacQuiddy.

All subjects included in the study were of Mexican-American heritage, as identified by Spanish surname. Controls as to socio-economic background and language spoken in the home were not enforced; however, such data were gathered and used as part of the analyses. In addition, efforts were made to identify and study equal numbers of subjects at each grade level, and equal numbers of males and females within each grade level.

Criteria

Research studies have consistently indicated that the most representative criteria in studies of this nature are evaluations of the intellectual and creative products of the sujects (Taylor, 1964a; 1964b). However, in dealing with children at these age and grade levels, product evaluation is extremely difficult (Wallbrown and Huelsman, 1975), and studies of highly gifted persons indicate that significant products seldom emerge before the age range 12-17 (Albert, 1971). However, Nuttall (1970) found teacher ratings to be a reasonably satisfactory

criterion, while Taylor (1970) found teacher ratings to be the best predictor when comparing them to a number of other predictors using creative writing performance as the criterion.

The approach used in this study therefore represented a combination of the teacher rating/product evaluation methods, as used by Schaefer and Anastasi (1968). An attempt was made to obtain two ratings for each subject, using a standard rating form developed by the investigators (see Appendix A). Ratings were completed by the student's current teacher and by the student's teacher from the previous year. Teachers were first trained in the rating process and were asked to evaluate each subject in the light of all other Mexican-American students of this grade level with whom they had had sufficient contact in order to have knowledge concerning their day to day behavior. The teachers were asked first to rate the students on traits which had been found to be characteristic of persons who had produced at high intellectual and creative levels, and secondly, to provide an overall rating of the student's potential abilities to achieve at high intellectual and creative levels if provided with appropriate training. Finally, teachers were asked to escribe at least one intellectual or creative product produced by each student who was given an overall rating within the top category (upper 10%).

The overall ratings of the two teachers were averaged and students ranked according to these average ratings. Thus three criterion groups were formed which were composed of students whose average ratings were within one of the following: 1) 0-35th percentile; 2) 36th-90th percentile; 3) 91st percentile and up. In addition, a second criterion was used, in that each of the current teachers of the

students serving as subjects were asked to complete for each student a copy of the AAMD Adaptive Behavior Scale, Public School Version (American Association of Mental Deficiency, 1974).

Measuring Instruments

The students were administered the following instruments (total testing time of about one and a half to two hours):

1) IPAT Culture Fair Intelligence Test (Cattell, 1958).

Although this is essentially a test of convergent thinking abilities, it does not depend upon culturally based factors, nor upon verbal sophistication. It therefore provides some basis for relatively unbiased measurement of convergent thinking abilities.

Developed extensively through factor analytic methods, it has been used throughout the world. Reliability coefficients exceed .80 in most samples tested, and validity coefficients vary from .36 (against Stanford Achievement Test) to .99 (on American Samples Against Spearman's g) (Tannenbaum, 1965). Group testing time was approximately 30 minutes.

2) The Wallach-Kogan Tests of Creativity (1965).

These tests measure divergent thinking abilities such as fluency and originality, and have been used extensively with elementary school children. Several studies have indicated that they are internally consistent and have some validity (Bartlett and Davis, 1974; Cropley and Maslany, 1969; Wallbrown and Huelsman, 1975). Divergent thinking tests in general have not been found to produce differences in overall scores when comparing culturally different to non-culturally different

students (Burnes, 1969; Nuttall, 1970; Torrance and Torrance, 1972).

Measures used in this study included four items each from the Alternate Uses and Pattern Meanings subtests.[1] (Items were chosen on the bases of high reliability and low intercorrelations). Alternate Uses, a verbal measure, yielded two scores, fluency and uniqueness (originality) and Pattern Meanings yielded the same two types of scores in the non-verbal area.

The tests were administered individually and were untimed. They normally required approximately 10 minutes of testing time (see Appendix B for copy of materials used).

3) The Barron-Welsh Art Scale (1963). This is a published instrument containing 86 black and white line drawings designed to measure esthetic sensitivity and preference for complexity. Original item weights were derived by comparing frequencies of responses of 37 artists and art students with those of 150 persons in general. Later studies added norms for creative writers and architects (MacKinnon, 1961b). Group testing time was approximately 20 minutes.

4) Barron Symbol Equivalence Test, Verbal and Non-Verbal Forms (Barron, 1976a). This is an unpublished instrument developed by the co-investigator. It addresses the questions of whether some persons are better able than others to per-

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[1] From Modes of Thinking in Young Children by Michael A. Wallach and Nathan Kogan. Copyright (c) 1965 by Holt, Rinehart and Winston. Reproduced by permission of Holt, Rinehart and Winston.

ceive symbolic equivalence and thus to make more extensive and more elegant use of the realities available for symbolization. Such perceptions and the technical command of them, it is hypothesized, are essential ingredients for creativity, especially in the areas of the artist and the poet. Group testing time was approximately 25 minutes (see Appendix C for copy of test).

5) Personal Adjective Check List. This is a 50 item adjective check list (developed by the investigators) which each subject was asked to complete as a description of himself/herself. The list was evaluated as to reliability and the items validated against the criterion. Scoring weights were developed so as to maximize prediction of persons having potential for future high level intellectual and creativity contributions. Group testing time was approximately 10 minutes (see Appendix D for copy of test).

Procedure

Permission to conduct the study was first obtained from school officials. The aid of the school psychologists in the two districts was obtained, and professional staff to conduct testing in the two areas were appointed. Written instructions pertaining to the testing and gathering of data were prepared (see Appendix E), and were presented to and discussed by the research staffs at meetings held in the two districts.

Sessions were then held in those schools in which principals had agreed to participate. At these sessions, the research staff presented

an overview to the principal and teachers, and answered questions pertaining to the study. Following this, parental consent slips were distributed to the parents of all Mexican-American children in the classes in which teachers had agreed to participate.

The research staff then held training sessions with the teachers in regard to evaluation procedures to be used in rating the students (see Appendix E). The teachers at each school then rated those students for whom parental approval had been given to participate in the project. Professional assistance was provided as needed at these sessions, as well as at the final sessions during which the teachers completed the AAMD Adaptive Behavior Scale for each participating child.

A sizeable number of teachers declined to participate in the study (or declined to rate all students of Spanish surname in their classes). In addition, a number of parents declined to sign the permission slips. Therefore, all students who returned signed permission slips and were accepted by their teachers for participation were included in the study.

Concurrent with the rating sessions, the research staff administered the measuring instruments to the participating children. They were tested in groups of 15 or less, with a Spanish speaking person in attendance to provide assistance as needed. As indicated earlier, the Wallach-Kogan test was administered individually, without time limits.

Approximately two months following the administration of the tests, 100 subjects from the Selma School District were readministered the Personal Adjective Check List, to permit an estimation of test-retest reliability.

STATISTICAL ANALYSES

The data were classified according to the following variables: 1) grade level; 2) sex; 3) urban vs. rural; 4) socio-economic categories; and 5) Predominant language spoken in the home.

Socio-economic categories were assigned based on the occupation of the father as obtained from school records. All subjects were assigned to one of three categories: 1 = unskilled labor; 2 = semi-skilled; 3 = skilled, technical, first-line supervisory, etc.

Data regarding language spoken in the home were taken from item 4 of the Home Language Survey, and subjects were assigned to one of two categories: 1 = Predominant Spanish spoken in the home; 2 = Predominant English spoken in the home.

All tests were scored by two different individuals to ensure accuracy. To obtain uniqueness scores on the Wallach-Kogan items, frequencies of responses to each item were calculated, and only those responses receiving a single frequency were given a weight of +1 for uniqueness. Frequency, originality, and overall scores (a synthesis of the first two) were developed by the co-director for the Barron Symbol Equivalency test using scoring methods outlined in a recent paper (Barron, 1976b). Data were then entered into the California State University, Fresno's CDC 3150 computer and all statistical analyses were performed on that equipment.

Descriptive statistics were first obtained for all of the measuring instruments except the Personal Adjective Check List. These descriptive statistics were examined, and several conclusions

were reached: 1) overall variability was too great to warrant overall analyses; 2) grade level was contributing to the greatest variability; and 3) sample size was such that analyses involving grade level and any other variable (sex, urban/rural, etc.) reduced cell sizes to levels below acceptable standards for statistical analyses. Therefore, analyses of these measuring instruments were made by grade level only using teacher ratings as the criterion. Separate analyses were made for the verbal and non-verbal measures on the Wallach-Kogan, as well as for the fluency and uniqueness scores for that test. Additionally, fluency, originality, and overall scores were treated separately for the Barron Symbol Equivalency Test.

The influence of teaching experience on ratings was examined through computation of a rank-order correlation between average years of teaching experience and ratings. Analyses were then made for each of the tests (except the Personal Adjective Check List) using t tests to compare subjects rated by teachers in the following groupings:

1) Upper 10% compared to lower 35%.

2) Upper 10% compared to lower 90%.

The Personal Adjective Check List was evaluated using teacher ratings as the criterion. Chi square tests (with Yates Correction) were computed for each item against average teacher ratings. Separate analyses were made for males and females. Weights of +1 were then assigned to those items found to significantly differentiate upper and lower groups, and original tests (for those subjects who had later been retested with this instrument) were then scored using these weights. The Check Lists administered as re-tests were then scored for these same subjects using the developed weights, and a Pearson r correlation

was computed between the test and the retest scores to estimate reliability. Seperate reliability correlations were computed for males and females.

Multiple correlations were then computed using appropriate instruments in an attempt to maximize prediction of the teacher rating criterion, using the upper 10% and the lower 35% as criterion groups.

Finally, the measuring instruments were evaluated in reference to their effectiveness and efficiency for use in an identification situation as proposed in this paper. Effectiveness of a procedure (Chambers, 1959) refers to the number of persons correctly identified by a procedure. In this case, teacher ratings were the criterion, and the upper 10% served as the criterion group. The effectiveness of the predictive measuring instruments was determined by computing the percentage of the students falling within this upper limit who were correctly identified by a given minimum score on the predictive measuring instrument. Efficiency, on the other hand, refers to the percentage which reflects the ratio between the total number correctly identified compared to the total number included by a given minimum score (which included both those correctly and those incorrectly identified).

In the context of this study, since only the upper 10% served as the criterion group, it was important to select minimum scores which eliminated as few subjects as possible who fell in this category. Therefore, minimum scores on all predictive measuring instruments were set between 75% and 100% effectiveness, with efficiency permitted to vary. An attempt was then made to establish minimum scores on predictive instruments so as to permit their administration in a sequential fashion. In actual school situations as reported in the literature

this had been found to result in considerable time and cost savings with little detriment to the students (Chambers, 1959).

Following the above, analyses were made by grade level for each of the measures (except the Personal Adjective Check List), using the results of each of the scales of the AAMD Adaptive Behavior Scale as criteria. Since scores on these scales tended to cluster, it was not possible to compare the same upper and lower percentages for each scale; however, every attempt was made to standardize comparisons as closely as possible to the upper 10%, lower 35% model. Again, t tests were used.

Finally, turning to the areas of socio-economic level and predominant language spoken in the homes of the subjects, several examinations of the data were made. First, a rank-order correlation was computed between these two variables. A second rank-order correlation was then computed between socio-economic levels and average teacher ratings for the subjects. Next, a third rank-order correlation was computed between predominant language spoken in the home and average teacher ratings.

The final analysis in this area attempted to determine the relationship of socio-economic status and language spoken in the home to the students' performance on the tests and to their evaluations by the teachers on the AAMD. In this regard, Analysis of Covariance was used. A number of separate analyses were made, using the data upon which significant t tests had been found in the earlier analyses (both when using average teacher ratings as the criterion, and when using AAMD scores as criteria). In the first series of analyses using Covariance, socio-economic status was held constant; in the second, language in the home was held constant.

DATA PRESENTATION AND RESULTS

Characteristics of the Participating Subjects

A total of 298 children participated in the study. Tables 1 and 2 present relevant data regarding these subjects. As may be noted, the majority of students came from homes in which the father's occupation fell in the unskilled category and the predominant language spoken in the home was Spanish.

Tables 3-11 then present average test scores and standard deviations for subjects categorized by grade level, sex, and urban/rural characterization of school district. N varied considerably among these cells from table to table. This variation was due predominately to the fact that the tests were administered in some cases on more than one day, with some students being absent on the second test day. Additionally, students tended to move in and out of districts fairly rapidly, especially in the district categorized as rural. Overall, however, although the children in the rural area represented a much more heavily migratory group, few significant differences in test performance were noted between subjects in the urban and rural samples. Similarly, males and females showed strikingly consistent results on most measures.

In addition to student participation in the project, a total of 67 teachers participated in the evaluations of students' potential abilities to perform at highly creative levels. Table 12 presents data concerning these teachers and their years of teaching experience. A rank-order correlation of .16 indicated a slight, but significant

Table 1
Number of Subjects Classified by Grade Level, Sex, and Urban/Rural School Classification

Grade	Urban		Rural		Totals		
	Male	Female	Male	Female	Male	Female	All
3	18	16	15	14	33	30	63
4	21	21	14	23	35	44	79
5	18	22	17	27	35	49	84
6	17	17	23	15	40	32	72
Total	74	76	69	79	143	155	298

Table 2
Subjects Classified by Socio-Economic Status,*
Predominant Language Spoken in Home,
and Urban / Rural School Classification

Language	Urban			Rural			Totals			
	Socio-Economic Status*			Socio-Economic Status*			Socio-Economic Status*			
	1	2	3	1	2	3	1	2	3	All
Predominant Spanish	54	11	7	84	13	1	138	24	8	170
Predominant English	34	33	8	23	11	13	57	44	21	122
Total	88	44	15	107	24	14	195	68	29	292

*Socio-economic status based on occupation of father as follows:

1 = unskilled; 2 = semi-skilled; 3 = skilled

Table 3
IPAT IQ Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	89.82	18.62	89.19	19.89	102.27	12.09	104.71	7.37	95.66	16.87	96.43	17.06
4	94.22	16.91	95.75	17.23	94.86	13.72	95.52	15.73	94.50	15.36	95.63	16.24
5	99.56	14.42	92.24	15.58	86.65	14.92	92.56	15.99	92.91	15.87	92.42	15.64
6	94.75	16.52	95.25	16.55	90.35	15.84	94.53	15.23	92.15	16.06	94.90	15.66
Total	94.51	16.70	93.19	17.08	92.94	15.22	95.95	14.96	93.71	15.93	94.63	16.02

N varies from 14 to 152

Table 4
Wallach-Kogan Alternate Uses Fluency Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	6.17	2.96	5.69	2.57	6.93	3.37	7.50	3.23	6.52	3.12	6.53	2.99
4	6.29	2.72	6.71	2.80	9.14	3.30	8.70	3.23	7.43	3.25	7.75	3.16
5	9.00	3.20	6.91	2.54	8.94	3.30	8.56	4.78	8.97	3.20	7.79	3.94
6	8.00	1.70	9.06	2.82	9.30	3.30	10.60	3.91	8.75	2.78	9.78	3.41
Total	7.31	2.92	7.08	2.87	8.66	3.37	8.81	3.97	7.96	3.20	7.95	3.57

N varies from 14 to 153

Table 5
Wallach-Kogan Alternate Uses Uniqueness Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	.06	.24	.00	.00	.00	.00	.14	.53	.03	.17	.07	.37
4	.00	.00	.05	.22	.07	.27	.09	.29	.03	.17	.07	.26
5	.06	.24	.00	.00	.44	.63	.24	.52	.24	.50	.13	.40
6	.00	.00	.00	.00	.17	.39	.27	.59	.10	.30	.13	.42
Total	.03	.16	.01	.11	.18	.42	.18	.48	.10	.32	.10	.36

N varies from 14 to 153

Table 6
Wallach-Kogan Pattern Meaning Fluency Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	7.06	3.17	6.69	5.75	8.36	3.77	9.64	6.40	7.63	3.45	8.07	6.14
4	7.57	3.33	7.81	3.76	11.50	3.78	11.61	6.73	9.14	3.97	9.80	5.78
5	9.17	4.69	9.45	10.73	11.35	5.00	9.23	4.25	10.23	4.90	9.33	7.82
6	9.06	5.72	7.94	2.79	11.18	4.35	10.53	5.58	10.26	5.04	9.16	4.45
Total	8.18	4.30	8.08	6.73	10.70	4.38	10.26	5.69	9.38	4.50	9.18	6.30

N varies from 14 to 154

Table 7
Wallach-Kogan Pattern Meaning Uniqueness Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	.28	.67	.94	1.77	.57	.76	.79	1.12	.41	.71	.87	1.48
4	.48	.87	.24	.54	1.14	.95	1.13	2.07	.74	.95	.70	1.59
5	1.22	1.48	1.09	3.04	1.18	2.19	.42	.76	1.20	1.83	.73	2.13
6	.94	1.85	.76	.90	.86	1.08	1.00	1.00	.90	1.45	.88	.94
Total	.72	1.31	.75	1.89	.94	1.40	.81	1.38	.82	1.34	.78	1.65

N varies from 14 to 154

Table 8
Barron-Welsh Art Scale Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	25.67	10.96	17.63	9.11	25.40	10.11	22.64	9.87	25.55	10.42	19.97	9.65
4	26.11	9.19	23.14	8.53	23.36	12.86	19.30	9.58	24.94	10.80	21.14	9.20
5	23.76	13.21	23.86	12.61	24.29	7.90	20.26	10.11	24.03	10.72	21.83	11.29
6	25.44	10.75	19.81	10.57	25.30	12.36	25.67	10.89	25.36	11.58	22.65	10.96
Total	25.27	10.86	21.43	10.48	24.68	10.84	21.43	10.15	24.98	10.81	21.43	10.28

N varies from 14 to 153

Table 9
Barron Symbol Equivalence Fluency Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	.94	1.51	.73	1.03	1.33	1.72	1.08	1.78	1.10	1.58	.89	1.40
4	2.94	2.71	3.52	4.03	3.71	3.20	4.25	5.42	3.28	2.91	3.88	4.71
5	2.76	2.68	4.75	5.20	3.53	3.96	3.92	3.53	3.13	3.31	4.28	4.30
6	6.38	4.51	8.62	5.68	5.05	4.25	6.00	4.84	5.62	4.35	7.40	5.38
Total	3.17	3.52	4.42	5.10	3.66	3.74	3.94	4.39	3.40	3.62	4.18	4.74

N varies from 12 to 144

Table 10
Barron Symbol Equivalence Originality Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	.17	.51	.27	.59	.00	.00	.42	1.44	.10	.40	.33	1.04
4	.78	2.18	1.52	3.12	.57	1.40	.75	1.83	.69	1.86	1.15	1.57
5	.82	1.33	1.35	3.01	.87	1.77	1.15	1.41	.84	1.53	1.24	2.22
6	3.44	5.05	2.69	3.57	1.52	1.91	3.86	4.37	2.35	3.68	3.23	3.94
Total	1.25	2.97	1.47	2.93	.85	1.63	1.44	2.63	1.06	2.43	1.46	2.77

N varies from 12 to 144

Table 11
Barron Symbol Equivalence Overall Scores

Grade	Urban				Rural				Totals			
	Male		Female		Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
3	1.78	1.22	1.00	.63	1.67	.78	1.83	1.70	1.73	1.05	1.70	1.20
4	2.44	1.62	2.95	2.18	2.79	1.37	3.00	2.29	2.59	1.50	2.98	2.21
5	2.53	1.59	3.05	2.09	2.80	1.86	3.31	1.67	2.66	1.70	3.20	1.85
6	4.50	2.19	4.69	1.78	3.57	1.78	4.50	2.47	3.97	1.99	4.60	2.09
Total	2.77	1.92	3.08	2.07	2.84	1.67	3.21	2.15	2.80	1.80	3.15	2.11

N varies from 12 to 144

Table 12
Number of Teacher Evaluators
and Years of Teaching Experience

Urban				Rural				Total			
Current		Previous		Current		Previous		Current		Previous	
N	Average Yrs.Exp.	N	Average Yrs.Exp.	N	Average Yrs.Exp.	N	Average Yrs.Exp	N	Average Yrs.Exp.	N	Average Yrs.Exp.
23	12.48	29	13.72	18	8.39	23	10.48	41	10.68	52	12.29

Note: "Current" and "Previous" are not mutually exclusive categories, as current teachers in some cases also served as previous teachers.

negative relationship between years of teaching experience and ratings given to students. Thus, teachers with considerable experience were slightly more inclined to rate students lower than those teachers with lesser experience.

A total of 225 students, representing 76% of the total 298 participating subjects received ratings from both their current and previous year's teachers. The remainder were rated by their current teacher only, due to one of the following reasons: 1) current teacher also served as previous teacher; 2) previous teacher no longer with the district; 3) previous teacher declined to participate; or 4) student spent previous year in another school district.

Comparison of Students on Basis of Teacher Ratings

Examination of the results of the t tests between test scores and teacher ratings indicated similar findings when comparing the upper 10%/lower 35% and the upper 10%/lower 90%. Therefore only the findings for the upper 10%/lower 35% comparisons are presented.

Examination of the findings in Tables 13-16 indicates consistently significant results at all grade levels for the IPAT IQ test. Overall, the greatest number of different test scores significantly predicted the criterion at the fifth grade level.

Table 17 presents the results of the analyses of the items comprising the Personal Adjective Check List. As may be noted, of the total 64 items on the Inventory, only nine were found to significantly differentiate the groups for females, and only four items for males. Test-retest reliability for both groups was low. On the bases of these results, therefore, this test was omitted from inclusion in succeeding analyses.

Table 13
Comparison of High and Low Groups
(Upper 10% vs. Lower 35%)
on Teacher Ratings, Grade 3

Test	High Group		Low Group		t Test
	Mean	SD	Mean	SD	
IPAT IQ	110.12	7.41	89.92	17.55	3.06

Notes: 1. N varies from 8 to 24

2. t test significant $<$ .05 level

Table 14
Comparison of High and Low Groups
(Upper 10% vs. Lower 35%)
on Teacher Ratings, Grade 4

Test	High Group		Low Group		t Test
	Mean	SD	Mean	SD	
IPAT IQ	104.78	10.87	86.10	14.90	3.26
Wallach-Kogan Pattern Meaning Fluency	13.00	8.35	8.43	3.20	2.16
Symbol Equivalence Originality	2.44	3.83	.19	.66	2.52

Notes: 1. N varies from 9 to 23

2. t tests significant $<$ .05 level

Table 15
Comparison of High and Low Groups
(Upper 10% vs. Lower 35%)
on Teacher Ratings, Grade 5

Test	High Group		Low Group		t Test
	Mean	SD	Mean	SD	
IPAT IQ	108.12	10.68	87.12	13.32	4.03
Wallach-Kogan Alternate Uses Fluency	12.29	5.23	8.39	3.26	2.48
Symbol Equivalence Fluency	5.71	3.49	1.63	2.44	3.54
Symbol Equivalence Originality	2.29	1.16	.43	1.69	2.68
Symbol Equivalence Overall Rating	4.43	1.59	1.97	1.33	4.13

Notes: 1. N varies from 7 to 33

2. t tests significant $<.05$ level

Table 16
Comparison of High and Low Groups
(Upper 10% vs. Lower 35%)
on Teacher Ratings, Grade 6

Test	High Group		Low Group		t Test
	Mean	SD	Mean	SD	
IPAT Test	110.57	12.18	87.05	13.03	4.05
Symbol Equivalence Originality	8.33	6.16	1.25	1.79	4.37

Notes: 1. N varies from 6 to 21

2. t tests significant $\angle$ .05 level

Table 17
Comparison of High and Low Groups
(Upper 10% vs. Lower 35%)
on Teacher Ratings,
Personal Adjective Check List

Test	Items Found Significant	
	Males	Females
Personal Adjective Check List	Loyal	Unfeeling*
	Honest	Loyal
	Intelligent	Dependable
	Temper*	Greedy*
		Gifted
		Calm
		Fair
		Self-Controlled

Notes:
1. N varied from 16 to 52
2. Test-retest reliability for males: r = .23 (N = 50)
3. Test-retest reliability for females: r = .60 (N = 53)
4. Asterisk (*) indicates a negative relationship
5. Groups compared using Chi Square; items listed found significant $< .05$ level

The results of the remaining tests were then entered into multiple correlations in order to maximize prediction of the teacher rating criterion at each grade level. Table 18 presents the results of these analyses, which indicate highly significant results at each grade level.

The test data (again excluding the Personal Adjective Check List) were then examined in order to evaluate their effectiveness and efficiency for use in identification situations as proposed in this paper. The resulting sequential screening batteries for each grade level are presented in Tables 19-22. It is apparent that these test batteries represent reasonably effective and efficient means to identify those culturally different students who, according to teacher ratings, show the greatest potential for ultimate contributions at high intellectual and creative levels.

Comparison of Students on Basis of AAMD Adaptive Behavior Scale

Turning to the second criterion, Tables 23-26 present the results of t tests computed between the tests and upper/lower groups on the various scales of the AAMD Adaptive Behavior Scale. As may be noted, the IPAT IQ test again consistently indicated significant results with more scales of the criterion than did the other tests. From a different point of view, traits like Language Development, Vocational Activity, Self-Direction, and Responsibility showed more significant results in relation to test scores than did traits such as Violent and Destructive Behavior, Anti-Social Behavior, and the like.

Effects of Socio-Economic Background and Language Spoken in Home

To determine the relationship of these two variables, a rank-order correlation was computed. The correlation equalled .36, which was

Table 18
Multiple Correlations Comparing Tests and High and Low Groups
(Upper 10% vs Lower 35%)
on Teacher Ratings

Grade	Multiple R
3	.61
4	.55
5	.65
6	.78

Note: Due to low test-retest reliability, the Personal Adjective Check List was not included in the Multiple Correlations.

Table 19
Sequential Screening Battery, Grade 3

Sequence	Test	Minimum Score	Effectiveness	Cumulative Efficiency
1	IPAT IQ	100	100%	27%
2	Barron-Welsh Art Scale	13	100%	30%
3	Wallach-Kogan Pattern Meaning Fluency	4	100%	35%

Note: Effectiveness indicates the percentage of those students rated as falling in the top 10% criterion group who were correctly classified as a result of the minimum score on the measuring instrument.

Efficiency represents the ratio (expressed as a percentage) between the total number of students correctly classified by the minimum score as compared to the total number (including both those correctly and those incorrectly classified).

Table 20
Sequential Screening Battery, Grade 4

Sequence	Test	Minimum Score	Effectiveness	Cumulative Efficiency
1	IPAT IQ	100	78%	21%
2	Wallach-Kogan Pattern Meaning Fluency	6	78%	25%

Note: Effectiveness indicates the percentage of those students rated as falling in the top 10% criterion group who were correctly classified as a result of the minimum score on the measuring instrument.

Efficiency represents the ratio (expressed as a percentage) between the total number of students correctly classified by the minimum score as compared to the total number (including both those correctly and those incorrectly classified).

Table 21
Sequential Screening Battery, Grade 5

Sequence	Test	Minimum Score	Effectiveness	Cumulative Efficiency
1	IPAT IQ	100	75%	21%
2	Wallach-Kogan Alternate Uses Fluency	6	75%	30%
3	Wallach-Kogan Pattern Meaning Fluency	5	75%	33%

Note: Effectiveness indicates the percentage of those students rated as falling in the top 10% criterion group who were correctly classified as a result of the minimum score on the measuring instrument. Efficiency represents the ratio (expressed as a percentage) between the total number of students correctly classified by the minimum score as compared to the total number (including both those correctly and those incorrectly classified).

Table 22
Sequential Screening Battery, Grade 6

Sequence	Test	Minimum Score	Effectiveness	Cumulative Efficiency
1	IPAT IQ	100	86%	23%
2	Barron-Welsh Art Scale	8	86%	27%
3	Wallach-Kogan Pattern Meaning Fluency	6	86%	32%

Note: Effectiveness indicates the percentage of those students rated as falling in the top 10% criterion group who were correctly classified as a result of the minimum score on the measuring instrument. Efficiency represents the ratio (expressed as a percentage) between the total number of students correctly classified by the minimum score as compared to the total number (including both those correctly and those incorrectly classified).

Table 23
Comparison of High and Low Groups
on Adaptive Behavior Scale
Categories, All Grades

Tests	Factors				
	Independent Functioning	Economic Activity	Language Development	Vocational Activity	Self-Direction
IPAT IQ	3.13		3.52	2.63	3.97
Wallach-Kogan					
Alternate Uses, Fluency			3.60	3.13	3.76
Alternate Uses, Uniqueness					
Pattern Meanings, Fluency					
Barron-Welsh Art Scale		2.12		3.49	
Symbol Equivalence					
Fluency	2.78		2.96	2.00	2.08
Originality	2.32		2.98	2.28	3.29
Overall	2.97		3.95	2.97	2.87

Notes: 1. N varies from 26 to 118

2. Table values are t tests significant $\leq .05$ level

Table 24
Comparison of High and Low Groups
on Adaptive Behavior Scale
Categories, All Grades

Tests	Factors				
	Responsibility	Socialization	Violent & Destructive Behavior	Anti-Social Behavior	Rebellious Behavior
IPAT IQ	4.78	3.87			
Wallach-Kogan					
Alternate Uses, Fluency	2.92	2.20			
Alternate Uses, Uniqueness					
Pattern Meanings, Fluency				2.15	
Pattern Meanings, Uniqueness				2.45	
Barron-Welsh Art Scale					2.15
Symbol Equivalence					
Fluency	3.20				
Originality	4.06	2.29			
Overall	4.52				

Notes: 1. N varies from 32 to 214

2. Table values are t tests significant $\leq .05$ level

Table 25
Comparison of High and Low Groups
on Adaptive Behavior Scale
Categories, All Grades

Tests	Factors				
	Untrustworthy Behavior	Withdrawal	Stereotyped Behavior	Inappropriate Interpersonal Manners	Unacceptable Vocal Habits
IPAT IQ					
Wallach-Kogan					
Alternate Uses, Fluency					
Alternate Uses, Uniqueness					
Pattern Meanings, Fluency	2.35				
Pattern Meanings, Uniqueness	2.58				
Barron-Welsh Art Scale					
Symbol Equivalence					
Fluency					
Originality					
Overall				2.09	

Notes: 1. N varies from 6 to 255

2. Table values are t tests significant $\leq .05$ level

Table 26
Comparision of High and Low Groups
on Adaptive Behavior Scale
Categories, All Grades

Tests	Factors		
	Unacceptable or Eccentric Habits	Hyperactive Tendencies	Psychological Disturbances
IPAT IQ			
Wallach-Kogan			
Alternate Uses, Fluency			
Alternate Uses, Uniqueness		2.15	
Pattern Meanings, Fluency		2.50	2.20
Pattern Meanings, Uniqueness		3.59	
Barron-Welsh Art Scale			
Symbol Equivalence			
Fluency			
Originality		2.55	
Overall			

Notes: 1. N varies from 19 to 261

2. Table values are t tests significant $\leq .05$ level

statistically significant. An examination of the data indicated that the highest socio-economic level (categorization of fathers' occupation as skilled, first-line supervisor, etc.), was accompanied most often by English being the predominant language spoken in the home.

To examine the effects of these two variables on the teacher rating criterion, rank-order correlation coefficients were then computed between teacher ratings and each of the two variables. Resulting correlations were .06 with economic status and .00 with language spoken in the home.

To further check on the effects of these two variables on both criteria, Analysis of Covariance was computed using the data upon which significant t tests had been found in the earlier analyses (in which test data had been categorized first according to teacher ratings and then according to AAMD scores — Tables 13-16 and 23-26). Two covariance analyses were made in each case — the first controlling for socio-economic status, the second controlling for language spoken in the home.

Results based on teacher ratings as the criterion indicated 20 of the 22 covariance tests to be significant (i.e., the covariance analysis yielded the same results as the original t tests). Two covariance tests yielded p values of .06, just slightly above the .05 significance level used throughout the study.

Results based on AAMD Adaptive Behavior Scale scores indicated 71 of the 80 covariance tests to be significant. Nine covariance tests yielded p values ranging from .06 to .13, again slightly above the accepted .05 level.

The above analyses thus indicated that socio-economic level and language spoken in the home had little effect on either criterion used in the study.

IDENTIFYING THE CULTURALLY DIFFERENT GIFTED STUDENT

SUMMARY, DISCUSSION AND RECOMMENDATIONS

Summary

This study assumed that special education programs for the gifted have as their ultimate goal, the aiding of those students (who show the greatest potential for future high level intellectual and creative contributions) to ultimately perform at their highest levels. It further assumed that giftedness embraces a number of traits in addition to high level IQ, as found in studies of highly creative and talented persons. Within this context, the study was delimited to culturally different students, and an attempt was made to provide a relatively simple method of identifying those Mexican-American students who could most profit from special education programs for the gifted.

Approximately 298 Mexican-American students in grades three through six in the Selma School District (categorized as urban), and the Pajaro Valley School District (categorized as rural) served as subjects. They were rated by former and current teachers on traits found to be characteristic of highly creative and talented persons. In addition, teachers completed the AAMD Adaptive Behavior Scale for each subject. They were then divided into upper and lower groups on the basis of overall ratings. All students were administered the IPAT Culture Fair Intelligence Test, the Wallach-Kogan Tests of Creativity, the Barron-Welsh Art Scale, the Barron Symbol Equivalence Test, and a Personal Adjective Check List.

Results of the analyses between test data and teacher ratings indicated consistent significant results with the IPAT IQ Test throughout all grade levels. The Wallach-Kogan Tests and the Barron Symbol Equivalence Test also showed fairly consistent significant results.

The Personal Adjective Check List added little to the test battery, and test-retest reliability was found to be low. With that test excluded, Multiple Correlations of .55 to .78 were obtained, indicating the ability of the tests to predict the teacher ratings in a highly significant manner. Sequential screening batteries were developed which require relatively little testing time, while yielding reasonable levels of both effectiveness and efficiency (i.e., at relatively small cost, the tests identify the majority of Mexican-American students who, according to teacher ratings, show the greatest potential for future contributions of a high intellectual and creative nature, while at the same time screening out the majority of Mexican-American students who, according to teacher ratings, show the least potential for such contributions).

Results of the tests in relation to AAMD Adaptive Behavior Scale scores again indicated consistent significant results between scales and the IPAT IQ Test. Traits such as Language Development, Vocational Activity, Self-Direction and Responsibility showed more significant results in relation to test scores than did traits such as Violent and Destructive Behavior, Anti-Social Behavior, etc.

Measures of socio-economic background and language spoken in the home were found to be correlated. Highest socio-economic levels were associated with English as the predominant language spoken in the home. Socio-economic level and language spoken in the home were found to have little effect on either teacher ratings or results of the AAMD Adaptive Behavior Scale scores.

Discussion

A major purpose of this study was to develop a test battery which would help identify those Mexican-American students in

elementary schools who could most profit from special education programs for the gifted. Further, the method developed was to be relatively easy to administer and to be reasonable in cost.

This study achieved the above objectives. The sequential screening batteries recommended, if applied to all persons with Spanish surnames in given classes, would identify (according to teacher ratings) that 25 - 40% of the group who show the greatest potential for future high level intellectual and creative contributions. (This finding is strengthened since these same tests have been found to differentiate in the same direction in previous studies comparing highly creative adults to adults of lesser creative abilities). From such an identified group of students, teachers, principals, and other professional staff could select the size group for which resources are, or could be made available for special education programs for the gifted.

Costs for implementing this identification procedure would be minimal, in that two of the three tests recommended are group tests which require a total testing time of about 45 minutes. The third, individually administered test, (requiring about 10 minutes testing time), would be administered only to those persons meeting minimal scores on the other tests.

The major advantages of this approach are twofold: 1) it reduces the dependency on culturally loaded verbal measures for identification purposes, and broadens the approach so as to include personality and other traits in addition to cognitive abilities; and 2) it permits all students concerned to have the opportunity to qualify for admission to gifted education programs using objective measures developed through research procedures, while still retaining the valuable judgments of teachers, principals, and other professional staff.

Some of the test data also relate to the content of gifted education programs for culturally different students. Specifically,

the average IPAT IQ's for the upper 10% (based on teacher ratings) varied from 104-110, which represents the upper 25% - 38% on the standardization sample. Current California programs for the gifted and talented generally require students to place in the upper 3% on a standard IQ test. The implications of these findings are fairly obvious. If Mexican-American students are identified for placement in gifted programs through methods recommended in this study, some portions of the programs should be tailored to fit particular needs of these students.

From the theoretical viewpoint, the results of the study are particularly interesting. The hypothesis advanced by Dellas and Gaier (1970), that traits necessary for high level creative behavior develop early in life, was partially supported. Cognitive traits, as measured by the IPAT IQ Test, the Wallach-Kogan Tests and the Barron Symbol Equivalence Test, do seem to show differential effects as early as the third grade level. However, artistic preference, or esthetic sensitivity, as measured by the Barron-Welsh Art Scale, seems to develop (or at least to stabilize) much more slowly. Similarly, self-concept, which has consistently been found to be highly correlated with high level creativity in adults, apparently develops or stabilizes later in life, as evidenced by the meager findings using the Personal Adjective Check List with these elementary school children.

Recommendations

1. School Districts interested in identifying those Mexican-american students who show the greatest promise for future contributions of a high level intellectual and creative nature, should consider using the methods outlined in this paper, starting with children at the third grade level.

2. Special education programs for the gifted should be tailored to meet the special needs of culturally different children identified through the use of methods outlined in this paper. Special attention should be given to further development of verbal skills, and to broadening the stimulus background of such students.
3. The California Legislature should consider the special needs of culturally different gifted students and appropriate funds specifically to identify and to provide gifted education programs designed to meet the needs of such children.

BIBLIOGRAPHY

Albert, R. S. Cognitive development and parental loss among the gifted, the exceptionally gifted and the creative. Psychological Reports, 1971, 29 (1), 19-26.

American Association on Mental Deficiency. Adaptive Behavior Scale, Public School Version. Washington, D. C.: Author, 1975.

Barron, F. Creative vision and expression in writing and painting. In D. W. MacKinnon (Ed.), The creative person. Berkeley: Institute for Personality Assessment and Research, University of California, 1961. Pp. II-1 — II-15.

Barron, F. Creativity and the gifted. In New directions for gifted education, report on bicentennial mid year leadership training institute. Los Angeles: National/State Leadership Training Institute on the Gifted and Talented, 1976. (a)

Barron, F. Symbolic scope as a predictor of ability in art, Paper presented at 8th Western Symposium on Learning, Bellingham, Washington, October 8-9, 1976. (b)

Barron, F., and Welsh, G. S. The Barron-Welsh Art Scale. Palo Alto, California: Consulting Psychologists Press, 1963.

Bartlett, M. M., and Davis, G. A. Do the Wallach and Kogan tests predict real creative behavior? Perceptual and Motor Skills, 1974, 39 (2), 730.

Bruch, C. B. Assessment of creativity in culturally different children. Gifted Child Quarterly, 1975, 19 (2), 164-174.

Burns, M. J. Selected characteristics of a Children's Individual Test of Creativity. Dissertation Abstracts International, 1969, 30 (5-A), 1859.

Cattell, R. B. IPAT Culture Fair Intelligence Test. Champagne, Illinois: Institute for Personality and Ability Testing, 1958.

Chambers, J. A. Beginning a multidimensional theory of creativity. Psychological Reports, 1969, 25, 779-799.

Chambers, J. A. Relating personality and biographical factors to scientific creativity. Psychological Monographs, 1964, 78, No. 7 (Whole No. 584).

Chambers, J. A. Preliminary screening methods in the identification of intellectually superior children. Exceptional Children, 1959, 25, 145-150.

Cropley, A. J. A five-year longitudinal study of the validity of creativity tests. Developmental Psychology, 1972, 6 (1), 119-124.

Cropley, A. J., and Maslany, G. W. Reliability and factor validity of the Wallach-Kogan creativity tests. British Journal of Psychology, 1969, 60 (3), 395-398.

Dellas, M. and Gaier, E. L., Identification of creativity: the individual. Psychological Bulletin, 1970, 73 (1), 55-73.

Dill, J. R. A study of the influence of race of the experimenter and verbal reinforcement on creativity test performance of lower socio-economic black children. Dissertation abstracts International, 1972, 32 (10-B), 6071.

Getzels, F., and Jackson, P. Creativity and intelligence. New York: Wiley, 1962.

Guilford, J. P. Creativity. American Psychologist, 1950, 5, 444-454.

Hilliard, A. G. Alternatives to IQ testing: An Approach to the identification of gifted "minority" children. Sacramento: California State Department of Education, Special Education Support Unit, 1976.

Johnson, R. A. Differential effects of rewards vs. no reward instructions on the creative thinking of two economic levels of elementary school children. Journal of Educational Psychology, 1974, 66 (4), 530-533.

Khatena, J. Teaching disadvantaged pre-school children to think creatively with pictures. Journal of Educational Psychology, 1971, 62 (5), 384-386.

Kunz, J., and Moyer, J. E. A comparison of economically disadvantaged and economically advantaged kindergarten children. Journal of Educational Research, 1969, 62 (9), 392-395.

MacKinnon, D. W. Creativity in architects. In D. W. MacKinnon (Ed.), The creative person. Berkeley: Institute of Personality Assessment and Research, University of California, 1961. Pp. V-1 — V-24. (a)

MacKinnon, D. W. The creative person. Berkeley: Institute of Personality Assessment and Research, University of California, 1961. (b)

Montgomery, R. L. A study of relationships between Group Test of Creativity (GTOC) scores and achievement test scores of students with Spanish and non-Spanish surnames. Dissertation Abstracts International, 1973, 34 (6-A), 3149.

Nuttall, E. V. Creativity in boys: a study of the influence of social background, educational achievement, and parental attitudes on the creative behavior of ten year old boys. Dissertation Abstracts International, 1970, 31 (1-A), 231-232.

Parloff, M. B., and Datta, L. E. Personality characteristics of the potentially creative scientist. Science and Psychoanalysis, 1965, 8, 91-106.

Richmond, B. O. Creative and cognitive abilities of white and negro children. Journal of Negro Education, 1971, 40 (2), 111-116.

Richmond, B. O., and Norton, W. A. Creative production and developmental age in disadvantaged children. Elementary School Journal, 1973, 73 (5), 279-284.

Roe, A. A psychological study of eminent psychologists and anthropologists, and a comparison with biological and physical scientists. Psychological Monographs, 1953, 67, No. 2 (Whole No. 352).

Schaefer, C. E., and Anastasi, A. A biographical inventory for identifying creativity in adolescent boys. Journal of Applied Psychology, 1968, 52 (1), 42-48.

Tannenbaum, A. J. Review of IPAT Culture Fair Test. In O.K. Buros (Ed.). The sixth mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1965.

Taylor, C. W. (Ed.) Creativity: progress and potential. New York: McGraw-Hill, 1964. (a)

Taylor, C. W. (Ed.) Widening horizons in creativity. New York: Wiley, 1964 (b)

Taylor, J. L. An assessment of the value of certain measuring devices for identifying creative writing performance. Dissertation Abstracts International, 1970, 30 (9-A), 3804.

Terman, L. M., and Oden, M. H, The gifted group at mid-life. Stanford: Stanford University Press, 1959.

Torrance, E. P. Creativity research in education: still alive. In I. A. Taylor and J. W. Getzels (Eds.) Perspectives in creativity. Chicago: Aldine, 1975. Pp. 278-296.

Torrance, E. P., and Torrance, P. Combining creative problem - solving with creative expressive activities in the education of disadvantaged young people. Journal of Creative Behavior, 1972, 6 (1), 1-10.

Wallach, M., and Kogan, N. Modes of thinking in young children: A study of the creativity - intelligence distinction. New York: Holt, Rinehart, and Winston, 1965.

Wallbrown, F. H., and Huelsman, C. B. The validity of the Wallach-Kogan creativity operations for inner-city children in two areas of visual art. Journal of Personality, 1975, 43 (1), 109-126.

Wolfe, B. E. A comparison of the impact of two kindergarten programs on the creative performance of disadvantaged negro children. Dissertation Abstracts International, 1971, 31 (11-B), 6886.

STUDENT CHECKLIST

Name of Student: _____ Sex: _____

School: _____ Grade: _____

Name of Teacher: _____

Check One: _____ Current Teacher _____ Previous Teacher

Date: _____

The following checklist contains 12 scales relating to traits found to be characteristic of persons who have achieved at high intellectual and creative levels as adults. Following these traits is an overall evaluation scale. Please evaluate the student on all 12 traits plus the overall evaluation, in reference to all other students of the same cultural heritage and grade level with whom you have had sufficient acquaintance to be knowledgeable concerning their day to day behavior.

Complete the form by circling one number at the far right of each question. The numbers refer to a comparison of the student on the bases indicated above, indicating your opinion that the student falls in one of the following categories:

A rating of "1" - indicates that the student falls within the lowe[illegible]0% of the reference group;

A rating of "2" - indicates that the student falls within the 51st to 90th percentiles of the reference group (i.e., top half of the group, but not within the top 10%);

A rating of "3" - indicates that the student falls at or beyond the 91st percentile of the reference group (i.e., top 10%).

1. Convergent Thinking 1 2 3

   (General Intelligence)

2. Divergent Thinking 1 2 3

   (Ability to think of multiple solutions to problems; i.e., comes up with new ideas, etc.)

3. Intellectual Motivation 1 2 3

   (Self-directed towards specific goals or tasks. Works fairly long hours with minimal external encouragement.)

4. Breadth of Interests 1 2 3

   (Shows interest in a variety of topics. Becomes enthused when introduced to new topics.)

5. Independence 1 2 3

   (Able to develop ideas without being led; carries through on own.)

6. Dominance 1 2 3

   (Takes leadership in developing ideas and producing unique products; provides model for others.)

7. Esthetic Sensitivity 1 2 3

   (Demonstrates sensitivity to artistic expression, color, and form, and/or to peoples' emotions.)

8. Striving for Excellence 1 2 3

   (Reworks things; not satisfied with first results independent of appraisal by others.)

9. Persistence and Goal Setting 1 2 3

   (Determines and communicates by work or action a specific goal to be reached. Goals persist over a period of time -- longer than a day or so.)

10. Initiative 1 2 3

    (Instigates activities on his own with little direction from teacher or others; often continues such activities despite opposition.)

11. Intellectual Curiosity 1 2 3

(Spends considerable time exploring concepts, ideas, and/or creative products -- enjoys such activities.)

12. Introversion 1 2 3

(Frequently is alone -- seems to get pleasure from individual activities of an intellectual and/or creative nature.)

13. Overall Evaluation 1 2 3

(Now that you have reviewed the student's abilities of concern, please indicate the extent to which you feel the child has such potential abilities and traits which, if provided with appropriate training and support, would enable him/her to achieve at high intellectual and creative levels, as compared to others of his/her cultural heritage. This overall evaluation should not represent a mathematical average of the ratings on the above 12 traits, but rather should reflect your overall opinion of the student in the above regard.)

14. Creative Product

(If you have assigned an overall evaluation of "1" or "2" for the student on item 13, the evaluation is now complete. If you have assigned an overall evaluation of "3" for the student on item 13, please describe below one intellectual and/or creative product produced by the student which illustrates his high ability level.)

WALLACH-KOGAN TESTS *

Name (or student ID number) _____

School _____ Grade _____ Date _____

Alternate Uses

1. Tell me all the different ways you could use a knife.

2. Tell me all the different ways you could use a shoe.

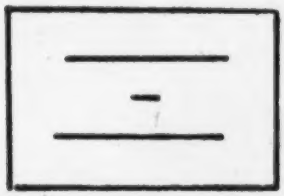
*From Modes of Thinking in Young Children, by Michael A. Wallach and Nathan Kogan. Copyright (c) 1965 by Holt, Rinehart & Winston. Reproduced by permission of Holt, Rinehart & Winston.

3. Tell me all the different ways you could use a button -- the kind that is used on clothing.

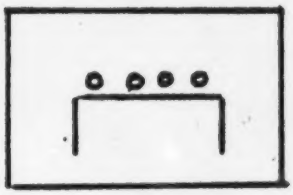
4. Tell me all the different ways you could use a chair.

Pattern Meanings

1. Here is a drawing. Tell me all the things you think this could be.

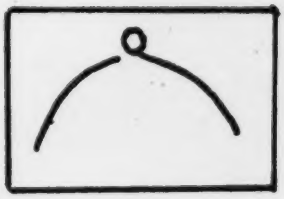


2. Here is another drawing. Tell me all the things you think this could be.



3. Here is another drawing. Tell me all the things you think this could be.

4. Here is another drawing. Tell me all the things you think this could be.



THE SYMBOL EQUIVALENCE TEST

Student Name or ID Number _____

School _____ **Grade** _____ **Date** _____

Directions: For each word picture found on the following pages, you are to list three other word pictures that are kind of like the listed one.

For Example: Leaves being blown in the wind

Possible equal things:

1. Handkerchiefs being tossed around in a dryer
2. Twigs being carried downstream by a fast current
3. People running away from a tiger that has gotten out of its cage

In the following pages there are ten word pictures. You will have 20 minutes to write down three word pictures that are kind of like each of the ones given.

THE SYMBOL EQUIVALENCE TEST

Part I

1. Haystacks seen from an airplane

2. A train going into a tunnel

3. The sound of a foghorn

4. A candle burning low

5. A ship lost in the fog

6. A floating feather

7. The increasing loud and steady sound of a drum

8. Sitting alone in a dark room

9. Empty bookcases

10. Tall trees in the middle of a field

PERSONAL CHECK LIST

Name:_____ Sex:_____

School:_____ Grade:_____ Date:_____

CHECK ALL OF THOSE WORDS WHICH DESCRIBE YOU.

_____1. alert (alerto)
_____2. sharp (listo)
_____3. aware (saber)
_____4. hard-working (trabajador)
_____5. free (libre)
_____6. leader (director)
_____7. winner (ganador)
_____8. superior (superior)
_____9. loud (escandaloso)
_____10. unfeeling (sin emocion)
_____11. stubborn (cabezudo)
_____12. warm (afectuoso)
_____13. unfriendly (enemigo)
_____14. sad (triste)
_____15. helpful (ayudante)
_____16. proud (orgulloso)
_____17. shy (vergonzoso)
_____18. good (bueno)
_____19. cheerful (alegre)
_____20. loyal (fiel)
_____21. dependable (contar con uno)
_____22. brave (valiente)
_____23. quick (rapido)
_____24. honest (honrado)
_____25. greedy (goloso)
_____26. noisy (ruidoso)
_____27. tense (nervioso)
_____28. dreamy (soñador)
_____29. selfish (interesado)
_____30. rude (grosero)
_____31. intelligent (inteligente)
_____32. gifted (talentoso)
_____33. calm (tranquilo)
_____34. fair (razonable)
_____35. self-controlled (dominio de si mismo)
_____36. undependable (no poder contar con uno)
_____37. talkative (hablador)
_____38. lonely (solo)
_____39. wholesome (saludable)
_____40. lazy (flojo)

CHECK ALL THOSE WORDS WHICH DESCRIBE YOU

_____41. clean (limpio)

_____42. weak (debil)

_____43. flashy (lucidor)

_____44. delicate (delicado)

_____45. skillful (industrioso)

_____46. withdrawn (retirado)

_____47. perfect (perfecto)

_____48. formal (formal)

_____49. frustrated (burlado)

_____50. sure (seguro)

_____51. artful (industrioso)

_____52. honorable (honorable)

_____53. worthy (digno)

_____54. grown-up (crecido)

_____55. annoying (fastidioso)

_____56. careless (descuidado)

_____57. different (diferente)

_____58. quiet (callado)

_____59. temper (mal genio)

_____60. hopeful (lleno de esperanza)

_____61. humble (humilde)

_____62. meek (amable)

_____63. evil (malo)

_____64. tender (cariñoso)

Special Education Research Program

Identifying the Culturally Different Gifted Student

INSTRUCTION SET

January, 1978

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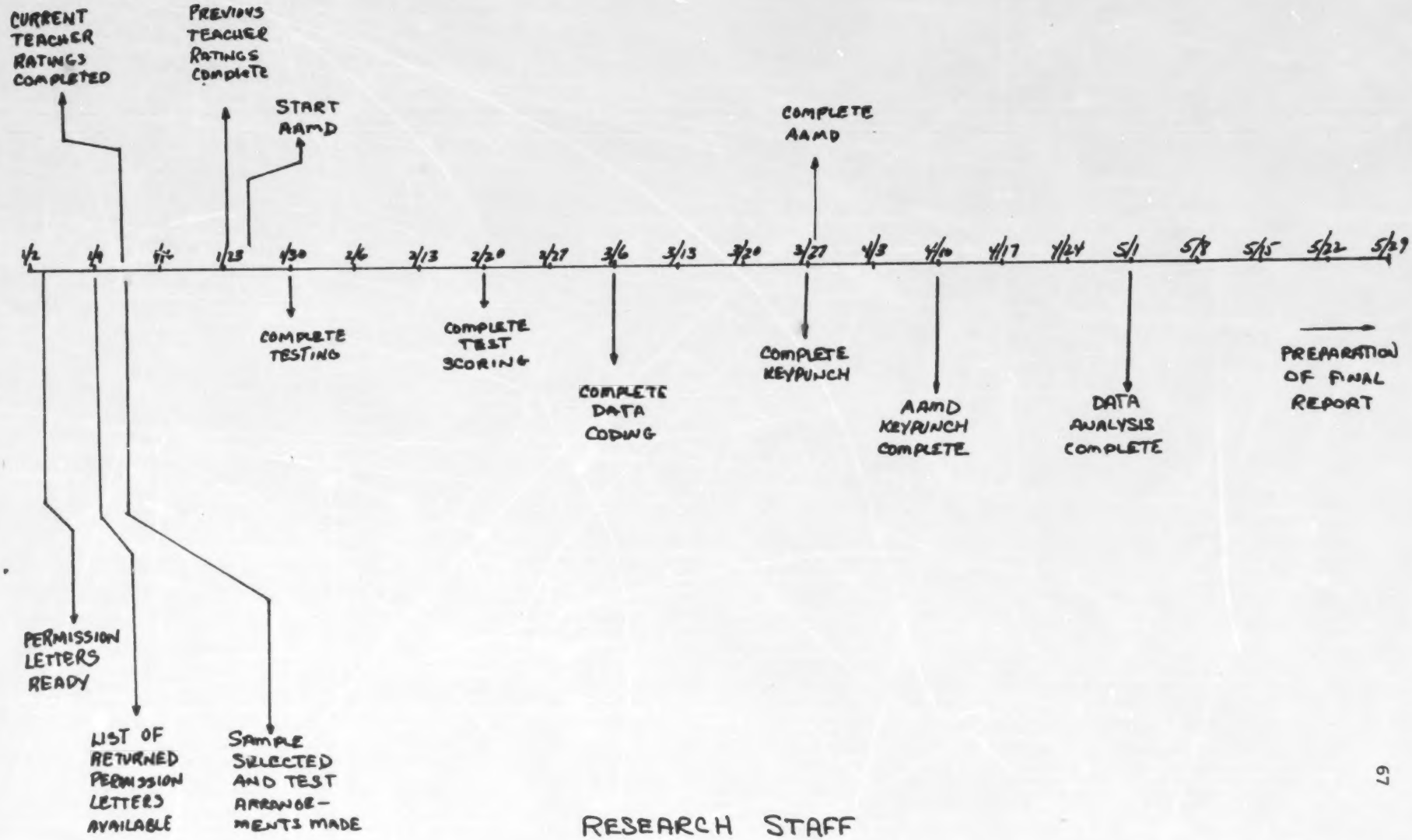
SCHOOL PERSONNEL



RESEARCH STAFF

Special Education Research Program

1977-78

Identifying the Culturally Different Gifted Student

Teacher Training and Student Evaluation Instructions for the Student Checklist

I. General Instructions

It is suggested that teachers be asked to complete their portion of the study in place of their regular responsibilities (possibly through the use of films or general assemblies). These techniques will help improve teacher attitude toward the test and the corresponding test results.

A. Get all participating teachers from all schools to meet as a group. The meeting should be scheduled for 2 hours during the period of January 9-10.

B. Read teachers the purpose of the project:
"To provide a relatively simple method of identifying those Mexican-American students who could most profit from special education programs for the gifted".

C. Read teachers the purpose of the form:
"To provide a basic evaluation of the student which will be used to measure the effectiveness of the tests being administered.

II. Specific Instructions:

A. Overview

1. Distribute handout #1, Blank Student Checklist, and allow the teachers time to read the cover page.
2. Indicate that evaluations will be secured from current as well as the previous year teacher to provide a measure of consistency.
3. Indicate that students are being rated in reference to other Mexican-American students of the same grade level.
4. Indicate that the scoring is 1, 2, 3 and represents a low to high scale with 1 representing the lower 50%, 2 representing the upper half exclusive of the top 10%,and 3 represents the top 10%.
5. Repeat #3.
6. Read each of the 14 items and answer any questions.

B. Joint Example

1. Distribute handout #2, First Case Study, and allow the teachers sufficient time for reading.
2. Review the suggested rating and answer any questions.

C. Independent Example

1. Distribute handout #3, Second Case Study, and allow the teachers sufficient time for reading.
2. Ask the teachers to independently rate the student described in the case.
3. When complete, review the suggested overall evaluation (#13) of "3" and discuss it individually with any teacher who rated the student differently.

D. Distribute the forms and have the teachers complete one for each student to be included in the study (preferably while in the group setting).

Teachers should be asked to rate as many as possible of the Spanish surnamed students in their class who have returned the permission slip. If classes are large and the teacher does not want to rate all such students, students should be selected from those who have returned the permission slip who will represent all 3 levels on the overall score (item #13) and should include a relatively equal number of males and females.

III. Post-rating Instructions

A. Collect the rating forms and tell the teachers that in the next few days they will be given a list of those students who they taught last year and for whom "previous teacher ratings" are needed.

B. From the completed "current teacher rating" forms, prepare a list of students. Indicate the name of the previous year teacher beside the student name.

C. Schedule a 2 hour meeting (using the above instructions) to train those previous year teachers not included in the first session.

D. Distribute a copy of the list of students and Student Checklist forms to the "previous year teachers" and have them rate their students independently of the first rating.

IV. Additional Information

A. The school psychologist should enter the following information in the upper right-hand corner of the form:

1. Occupation of father
2. Languages spoken in the home (in order of the most often spoken)--from item 4 of the Home Language Survey.

B. Prepare a list of all teachers participating in the study (previous and current) indicating number of years teaching experience.

Case #1: Joey

Joey completes his assignments on or ahead of schedule with apparent ease. When he has free time in class he generally spends it socializing with other classmates, often interrupting them.

He is not lazy but needs a little prodding, especially when beginning new areas. He grasps ideas or concepts well but seldom offers new ideas. While he participates, he generally doesn't take the leadership role in discussions. He normally completes homework and class assignments. When an assignment is completed he rarely checks it's accuracy.

Joey is a personable boy, enjoys school but has trouble sticking to a long range project like his Thanksgiving picture for open house which never did get finished. He enjoys field trips as a social outing. In fact, he got in trouble during the last trip for chasing a swan which was providing a very magestic and graceful performance for the class.

Case #2: Maria

Maria seems to enjoy her school work. She normally completes her assignments ahead of her classmates and often checks her answers or works extra problems to fill the remaining time. Although she doesn't complete her assignments as quickly as a couple of other students in the class, she is determined and gets satisfaction from "perfect papers" which she submits routinely.

She always volunteers to read the weekly story to the class and does a very good job. She often asks her teacher to explain some new topic or concept mentioned in the story. During discussion she literally bubbles over with ideas and has a tendancy to dominate the discussion. When she hasn't completed an assignment, she asks to take it along home even though many of her classmates criticize her. If the assignment can't be done at home, she is impatient to start it the next day.

During recess she normally serves as referee or makes drawings of the outdoor scenes. One of her drawings won the county elementary art contest this year. Maria is a very sensitive girl. In fact, she brought a wildflower for the last "show and tell" session and talked about how pretty it was.

STUDENT CHECKLIST

Name of Student: Joey Sex: M

School: CARTER Elementary Grade: 4

Name of Teacher: CARTER

Check One: ✓ Current Teacher _____ Previous Teacher

Date: JAN 4, 1978

The following checklist contains 12 scales relating to traits found to be characteristic of persons who have achieved at high intellectual and creative levels as adults. Following these traits is an overall evaluation scale. Please evaluate the student on all 12 traits plus the overall evaluation, in reference to all other students of the same cultural heritage and grade level with whom you have had sufficient acquaintance to be knowledgeable concerning their day to day behavior.

Complete the form by circling one number at the far right of each question. The numbers refer to a comparison of the student on the bases indicated above, indicating your opinion that the student falls in one of the following categories:

A rating of "1" - indicates that the student falls within the lower 50% of the reference group;

A rating of "2" - indicates that the student falls within the 51st to 90th percentiles of the reference group (i.e., top half of the group, but not within the top 10%);

A rating of "3" - indicates that the student falls at or beyond the 91st percentile of the reference group (i.e., top 10%).

1. Convergent Thinking 1 (2) 3

   (General Intelligence)

2. Divergent Thinking (1) 2 3

   (Ability to think of multiple solutions to problems; i.e., comes up with new ideas, etc.)

3. Intellectual Motivation 1 (2) 3

   (Self-directed towards specific goals or tasks. Works fairly long hours with minimal external encouragement.)

4. Breadth of Interests 1 (2) 3

   (Shows interest in a variety of topics. Becomes enthused when introduced to new topics.)

5. Independence 1 (2) 3

   (Able to develop ideas without being led; carries through on own.)

6. Dominance 1 (2) 3

   (Takes leadership in developing ideas and producing unique products; provides model for others.)

7. Esthetic Sensitivity (1) 2 3

   (Demonstrates sensitivity to artistic expression, color, and form, and/or to peoples' emotions.)

8. Striving for Excellence 1 (2) 3

   (Reworks things; not satisfied with first results independent of appraisal by others.)

9. Persistence and Goal Setting 1 (2) 3

   (Determines and communicates by work or action a specific goal to be reached. Goals persist over a period of time -- longer than a day or so.)

10. Initiative 1 (2) 3

    (Instigates activities on his own with little direction from teacher or others; often continues such activities despite opposition.)

11. Intellectual Curiosity (1) 2 3

(Spends considerable time exploring concepts, ideas, and/or creative products -- enjoys such activities.)

12. Introversion (1) 2 3

(Frequently is alone -- seems to get pleasure from individual activities of an intellectual and/or creative nature.)

13. Overall Evaluation 1 (2) 3

(Now that you have reviewed the student's abilities of concern, please indicate the extent to which you feel the child has such potential abilities and traits which, if provided with appropriate training and support, would enable him/her to achieve at high intellectual and creative levels, as compared to others of his/her cultural heritage. This overall evaluation should not represent a mathematical average of the ratings on the above 12 traits, but rather should reflect your overall opinion of the student in the above regard.)

14. Creative Product

(If you have assigned an overall evaluation of "1" or "2" for the student on item 13, the evaluation is now complete. If you have assigned an overall evaluation of "3" for the student on item 13, please describe below one intellectual and/or creative product produced by the student which illustrates his high ability level.)

Special Education Research Program

1977-78

Identifying the Culturally Different Gifted Student

Instructions for the AAMD Adoptive Behavior Scale

1. Administer entire Public School version.
2. We suggest that administration be done in a group meeting of all teachers, school by school, with the School Psychologist in attendance to explain procedures on how to fill out forms and to answer questions. We suggest the teachers complete all forms during this session (takes about 20-30 minutes per child).
3. Administer AAMD several weeks after all evaluation forms have been completed by current and previous teachers.
4. Score the scale as per instructions in the manual and enter attained scores in appropriate place on Profile Summary Sheets for all 10 scales of Part I, and all 14 scales of part II.